

Spermophilus atricapillus.

By Sergio Ticul Alvarez-Castañeda, Gustavo Arnaud, and Eric Yensen.

Published 17 May 1996 by the American Society of Mammalogists

Spermophilus atricapillus Bryant, 1889

Baja California Rock Squirrel

Spermophilus grammurus atricapillus Bryant, 1889:26. Type locality "Comondu, Lower California" [Baja California Sur, Mexico].

Spermophilus atricapillus Bryant, Hall and Kelson, 1959:355.

CONTEXT AND CONTENT. Order Rodentia, Suborder Sciurognathi, Family Sciuridae, Subfamily Sciurinae, Genus *Spermophilus*, Subgenus *Otospermophilus* (Hoffmann et al., 1993). *Spermophilus atricapillus* is monotypic (Hall, 1981).

DIAGNOSIS. *Spermophilus atricapillus* (Fig. 1) can be distinguished from *S. variegatus* by the presence of a dark median area on the head and shoulders. The median area is equally dark on both head and shoulders, whereas the shoulders are darker than the top of the head in *S. beecheyi* (Hall, 1981). The tail is longer (185-210 vs. 145-200 mm) and the skull slightly smaller (greatest length 54.8-58.5 vs. 51.6-62.4 mm) than in *S. beecheyi* (Hall 1981; Howell, 1938).

GENERAL CHARACTERS. The color of *S. atricapillus* (topotypes in winter pelage) is as follows. "Head fuscous black, sparingly sprinkled with pinkish buff; eye ring buffy white; ears fuscous black, narrowly margined on posterior border with pale buff; anterior half of back fuscous black, the sides of neck and shoulders tipped with buffy white, leaving a well defined dark triangular patch uniting with the color of the head; hairs on posterior back fuscous at base, tipped with pinkish cinnamon and pale pinkish buff; front feet pale buff; hind feet pinkish buff; tail mixed fuscous black and pale buff; under parts fuscous, overlaid with pale buff" (Howell, 1938:162).

Mean measurements (in mm, with range in parentheses) of seven adult males and five adult females from the type locality are as follows (Howell, 1938:162): total length 440.4 (410-465); length of tail vertebrae, 195 (185-210); length of hind foot, 57.2 (55-60); length of ear from notch (dry), 17.5, 18 ($n = 2$). In nine fresh specimens from San Pedro de la Presa (EY and STAC, original data), the ear from notch measured 25.6 (24-28), and mass was 551 g (485-620).

The skull (Fig. 2) is similar to other *Otospermophilus*. Skull measurements (in mm, $n = 5$ for males, $n = 4$ for females) from type locality are: greatest length, 56.3 (54.8-58.5); palatilar length, 27 (26-28.5); zygomatic breadth, 34.5 (33.1-35.7); cranial breadth, 23.5 (22.6-24.6); interorbital breadth, 13 (12-14); postorbital constriction, 16 (15.1-17); length of nasals, 20.2 (19.1-21); maxillary tooth row, 11.5 (11-12; Howell, 1938:162).

DISTRIBUTION. *Spermophilus atricapillus* (Fig. 3) occurs in the volcanic Sierra de Santa Lucia Mountains in the northern two-thirds of the State of Baja California Sur and in the extreme southern part of the State of Baja California, Mexico (Huey, 1964; Ramírez-Pulido et al., 1983; Ramírez-Pulido et al., 1986). We know of at least 92 specimens from Comondú, San Ignacio, and San Pablo (Hall, 1981; Howell, 1938), and 13 specimens from five unreported localities (Santa Agueda, Mision Santa Gertrudis, Canipole, San Javier, and San Pedro de la Presa; housed in the National Museum of Natural History, Museum of Vertebrate Zoology, San Diego Natural History Museum, Centro de Investigaciones Biológicas del Noroeste, and Albertson

College). The latter of these unreported localities extends the distribution from Comondú south 145 km to 24°50'48"N lat. *Spermophilus atricapillus* occurs about 200 km southeast of the southernmost records of *S. beecheyi*. No fossils of *S. atricapillus* are known.

FORM AND FUNCTION. We examined Baja California rock squirrels collected in February, March, April, May, July, September, October, and November. This suggests an extended activity cycle and a short period of seasonal torpor. Residents of San Pedro de la Presa have reported that these squirrels are active all year. Specimens collected in September and October were nearly through molting (Howell, 1938).

There are five or six pairs of mammae: one or two pectoral, two abdominal, and two inguinal in specimens examined from San Pedro de la Presa. Males were scrotal in early September.

ECOLOGY. This species inhabits mountain areas of volcanic origin (Fig. 4). The vegetation in these areas is dominated by *Pachycereus pringlei* (cardon), *Machaerocereus gummosus* (pitaya agria), *Lemaireocereus thurberi* (pitaya dulce), *Opuntia cholla* (choya), *Prosopis juliflora* (mesquite), *Lysiloma candida* (palo blanco), *Cercidium peninsulare* (palo verde), *Bursera ceraciflora* (torote) and *Jatropha cinerea* (lomboy—Shreve and Wiggins, 1964).

REMARKS. The specific epithet *atricapillus* presumably is derived from the Latin words *atrium*, meaning "a place blackened by smoke of the fire" and *capillus*, meaning "the hair of the head" (Simpson 1960:89). Bryant (1889:26) referred to the taxon as the "black-capped ground squirrel" and commented upon the "striking peculiarity of the black crown and blackish scapular region," but did not otherwise discuss the etymology. Older publications (e.g., Howell, 1938) refer to *Spermophilus atricapillus* as the Lower California rock squirrel. The 29 specimens from Comondú, Baja California, that formed the type collection housed in the California Academy of Science were destroyed by fire in 1906 (Howell, 1938). We thank Sergio Rosas and A. Rodríguez for taking the photographs.



FIG 1. *Spermophilus atricapillus* from near San Pedro de la Presa, Baja California Sur, Mexico. Photograph by A. Rodríguez.

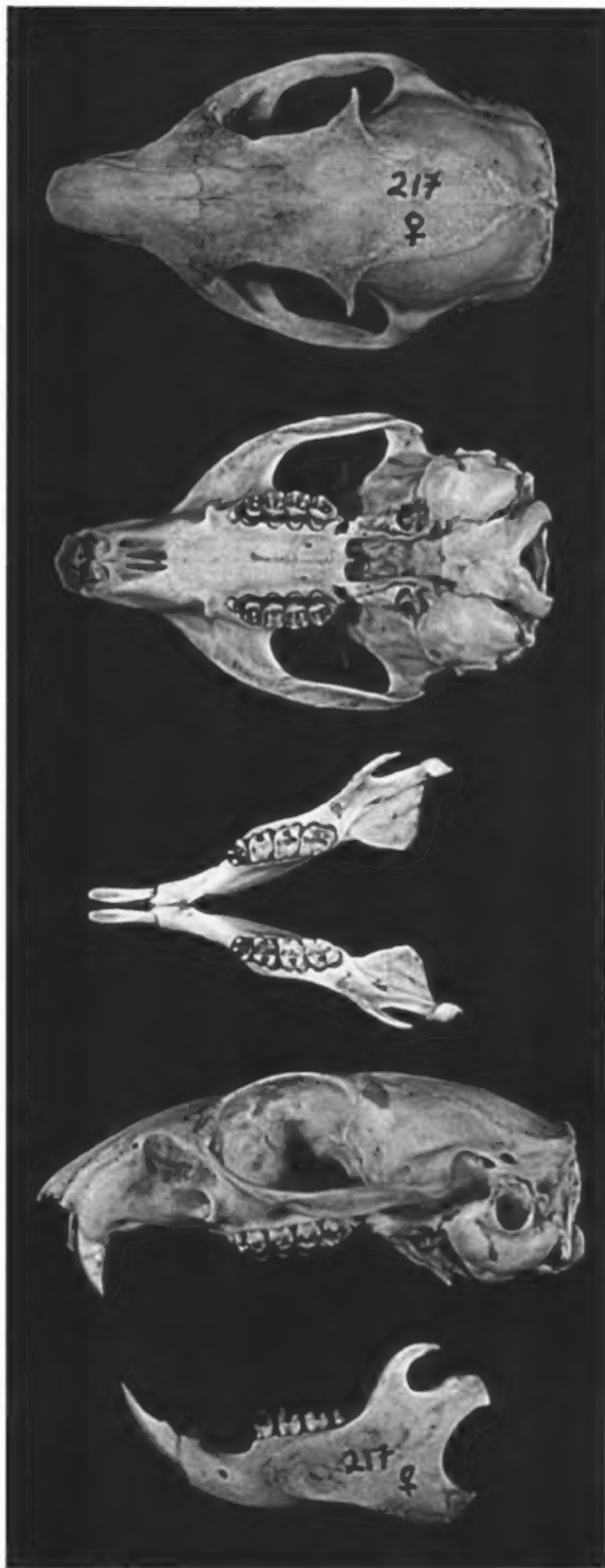


FIG. 2. Dorsal, ventral, and lateral views of the cranium, and dorsal and lateral views of the mandible of a male *Spermophilus atricapillus* from San Pedro de la Presa, Baja California Sur, Mexico. Specimen from collection of the Centro de Investigaciones Biológicas del Noroeste, #217. The greatest length of skull is 58.2 mm. Photographs by Sergio Rosas.

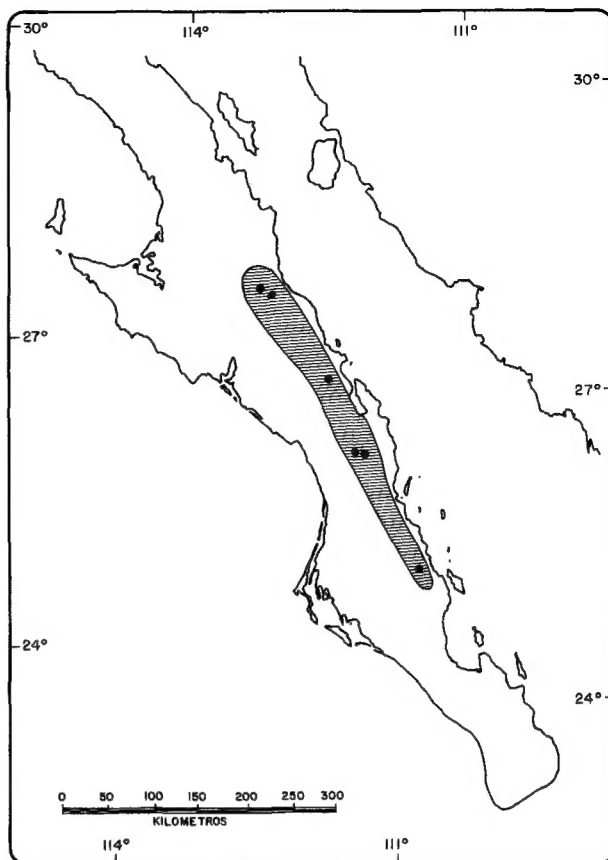


FIG. 3. Distribution of *Spermophilus atricapillus* in Baja California Sur, Mexico (modified from Hall, 1981).



FIG. 4. Habitat of *Spermophilus atricapillus*. Photograph by G. Arnaud.

LITERATURE CITED

- BRYANT, W. E. 1889. Provisional description of supposed new mammals from California and Lower California. *Proceedings of the California Academy of Science*, Series 2, 2:25-27.
- HALL, E. R. 1981. *The mammals of North America*. Second ed. John Wiley & Sons, New York 1:1-600 + 90.
- HALL, E. R., AND K. R. KELSON. 1959. *The mammals of North America*. Ronald Press, New York 1:1-546 + 79.
- HOFFMANN, R. S., C. G. ANDERSON, R. W. THORINGTON, JR., AND L. R. HEANEY. 1993. Family Sciuridae. Pp. 419-466, in *Mammal species of the world: a taxonomic and geographic reference*. Second ed. (D. E. Wilson and D. M. Reeder, eds.). Smithsonian Institution Press, Washington, D.C., 1206 pp.
- HOWELL, A. H. 1938. Revision of the North American ground

- squirrels, with a classification of the North American Sciuridae. *North American Fauna*, 56:1-256.
- HUEY, L. M. 1964. The mammals of Baja California, Mexico. *Transactions of the San Diego Society of Natural History*, 13: 85-168.
- RAMÍREZ-PULIDO, J., R. LÓPEZ-WILCHIS, C. MUNDESPACHER, AND I. E. LIRA. 1983. Lista bibliográfica de los mamíferos de México. Universidad Autónoma Metropolitana-Iztapalapa, 363 pp.
- RAMÍREZ-PULIDO, J., M. C. BRITTON, A. PERDOMO, AND A. CASTRO. 1986. Guía de los mamíferos de México, referencias hasta 1983. Universidad Autónoma Metropolitana-Iztapalapa, 720 pp.
- SHREVE, F., AND I. L. WIGGINS. 1964. Vegetation and flora of the Sonoran Desert. Stanford University Press, 1:1-840.
- SIMPSON, D. P. 1960. Cassell's new Latin dictionary. Funk & Wagnalls Company, New York, 883 pp.
- Editors of the account were DUKE S. ROGERS, ELAINE ANDERSON, and KARL F. KOOPMAN. Managing editor was ALICIA V. LINZEY.
- S. T. ALVAREZ-CASTAÑEDA AND G. ARNAUD, CENTRO DE INVESTIGACIONES BIOLÓGICAS DEL NOROESTE, A. C., APARTADO POSTAL 128, LA PAZ, BAJA CALIFORNIA SUR, C. P. 23000, MÉXICO; and E. YENSEN, MUSEUM OF NATURAL HISTORY, ALBERTSON COLLEGE OF IDAHO, CALDWELL, IDAHO 83605.